

REMARKS/ARGUMENTS

Reconsideration of this application, in view of the following remarks and arguments, is respectfully requested.

Claims 1-39 were originally presented for consideration in this application and currently stand rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 3,756,202 to Keith in view of U.S. Patent 4,418,650 to Johnson et al. This rejection is respectfully traversed for the following reasons.

Via independent Claim 1, each of applicants' Claims 1-10 specifies a **fuel burner** extending through a **combustion chamber** in a spaced apart relationship with an interior side portion thereof, the fuel burner having a burner side portion facing the interior side portion of the combustion chamber, and an insulation structure **sandwiched between and contacting the burner side portion** and the interior side portion of the combustion chamber, the insulation structure being **resiliently compressible** between the burner side portion and the interior side portion of the combustion chamber in response to thermal expansion of the fuel burner during firing thereof.

Referring initially to the gas-fired boiler embodiment shown in FIGS. 1 and 2 of Keith, there is clearly no insulation structure in Keith which is sandwiched between and contacts (1) a portion of the gas burner 14 extending through the combustion chamber 15 and (2) an interior side portion of the combustion chamber 15 as required by Claims 1-10. In this regard it should be noted that there is no insulation whatever in the Keith combustion chamber 15 used in conjunction with the gas burner 14 as illustrated in FIGS. 1 and 2.

In the oil-fired boiler embodiment shown in FIGS. 3 and 4 of Keith, no portion of the oil burner 14 extends through the combustion chamber,

and there is accordingly no insulation structure in the combustion chamber which is resiliently compressed between a portion of the burner and an interior side portion of the combustion chamber as required by Claims 1-10. In this regard it should be noted that the combustion chamber in FIGS. 3 and 4 of Keith is lined with a **rigid refractory material 42** - there is no resiliently compressible insulation within the combustion chamber.

These clear deficiencies in Keith are in no manner cured by the Johnson et al reference. In Johnson et al, the only disclosed burner is the bed light-off burner 32. No portion of the burner 32 extends through a combustion chamber as required by Claims 1-10, and there is no resiliently compressible insulation structure sandwiched between any portion of the burner 32 and an interior side portion of a combustion chamber. There is an illustration in FIG. 2 of Johnson et al of a ceramic fiber insulation blanket 60 disposed against an insulation board 56 and contacted by tubes 40. However, these tubes 40 are **cooling tubes** which receive a through-flow of **cooling water**. Tubes 40 are clearly not burner structures of any sort. Not only does Johnson et al fail to teach or suggest a fuel burner extending through a combustion chamber, with a resiliently compressible insulation structure sandwiched between and contacting a burner side portion and an interior side portion of the combustion chamber, Johnson et al teaches **directly away from** these claim limitations - the only burner shown in Johnson et al (the burner 32) is disposed entirely externally of the balance of the illustrated fluidized bed heat exchanger structure.

Accordingly, it is respectfully submitted that Claims 1-10 are patentably distinguishable over U.S. Patent 3,756,202 to Keith and U.S. Patent 4,418,650 to Johnson et al whether these two references are considered singly or in any combination thereof.

Via independent Claim 11, each of applicants' Claims 11-20 specifies *inter alia* a fuel-fired heating apparatus in which a plurality of tubular fuel burners longitudinally extend horizontally through a combustion chamber, with a resilient insulation structure sandwiched between and contacting a bottom interior side portion of the combustion chamber. As discussed above, neither of the Keith and Johnson et al references teaches or suggests these claim limitations. It is thus respectfully submitted that applicants' Claims 11-20 are patentably distinguishable over U.S. Patent 3,756,202 to Keith and U.S. Patent 4,418,650 to Johnson et al whether these two references are considered singly or in any combination thereof.

Via independent Claim 21, each of applicants' Claims 21-29 specifies *inter alia* a fuel-fired heating apparatus in which a fuel burner extends through a combustion chamber and has first and second opposite side portions, with a resilient insulation structure being held against only the second side portion of the fuel burner. As previously discussed herein, neither Keith nor Johnson et al discloses or in any manner suggests a burner structure extending through a combustion chamber and having a side portion contacted by a resilient insulation structure. It is thus respectfully submitted that applicants' Claims 21-29 are patentably distinguishable over U.S. Patent 3,756,202 to Keith and U.S. Patent 4,418,650 to Johnson et al whether these two references are considered singly or in any combination thereof.

Via independent Claim 30, each of applicants' Claims 30-34 specifies *inter alia* a fuel-fired heating apparatus in which a fuel burner extends through a combustion chamber, with a burner side portion facing an interior side portion of the combustion chamber, with a structure sandwiched between and contacting the burner side portion and the interior side portion of the combustion chamber. Clearly, neither Keith

nor Johnson et al discloses or suggests a structure of any sort which is sandwiched between and contacts a burner side portion disposed in a combustion chamber and an interior side portion of the combustion chamber. It is thus respectfully submitted that applicants' Claims 30-34 are patentably distinguishable over U.S. Patent 3,756,202 to Keith and U.S. Patent 4,418,650 to Johnson et al whether these two references are considered singly or in any combination thereof.

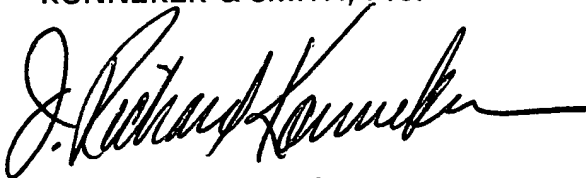
Finally, via independent Claim 35, each of applicants' Claims 35-39 specifies *inter alia* a fuel-fired heating apparatus in which a plurality of tubular fuel burners extend horizontally through a combustion chamber, with bottom side portions of the fuel burners being spaced upwardly apart from and facing a bottom side portion of the combustion chamber, and a structure sandwiched between and contacting the bottom interior side portion of the combustion chamber and the bottom side portions of the fuel burners. As discussed above in conjunction with Claims 30-34, neither Keith nor Johnson et al discloses or in any manner suggests these claim limitations. It is thus respectfully submitted that applicants' Claims 35-39 are patentably distinguishable over U.S. Patent 3,756,202 to Keith and U.S. Patent 4,418,650 to Johnson et al whether these two references are considered singly or in any combination thereof.

In view of the foregoing remarks and arguments, all of the claims currently pending in this application are now seen to be in a condition for allowance. A Notice of Allowance of Claims 1-39 is therefore earnestly solicited.

The Examiner is hereby requested to telephone the undersigned attorney of record at 972/516-0030 if such would further or expedite the prosecution of the instant application.

Respectfully submitted,

KONNEKER & SMITH, P.C.

A handwritten signature in black ink, appearing to read "J. Richard Konneker", with a long horizontal flourish extending to the right.

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450,

on March 26, 2005
Diane Sutton